

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

KIM, Seong-Nam

17th Floor, City Air Tower 159-9 Samsung-dong, Gangnam-gu, Seoul 135-973 Republic of Korea

PCT 03 MAY 2005

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 19 APRIL 2005 (19.04.2005)Applicant's or agent's file reference
OS040032

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2005/000029

International filing date (day/month/year)

06 JANUARY 2005 (06.01.2005)

Priority date(day/month/year)

06 JANUARY 2004 (06.01.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC7 H04B 7/26

Applicant

SK TELECOM CO., LTD. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/KR2005/000029

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/KR2005/000029

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 15	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1 - 15	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1 - 15	YES
	Claims	NONE	NO

2. Citations and explanations :

1. NOVELTY AND INVENTIVE STEP

Reference is made to the following documents:

D1 : US 6070075 A (SAMSUNG ELECTRONICS CO., LTD.) 30 MAY 2000

D2 : US 2002/0061749 A1 (JASON F. HUNZINGER) 23 MAY 2002

D3 : US 2002/0051432 A1 (LG ELECTRONICS CO., LTD.) 2 MAY 2002

Claims 1-15 disclose a method of controlling a multi-mode multi-band mobile communication terminal for handover comprising : the step of a synchronous (CDMA2000) modem unit of the mobile communication terminal receiving a dummy pilot signal from a synchronous mobile communication system, driving the synchronous modem unit of the mobile communication terminal, searching for a cell for handover, notifying an asynchronous (WCDMA) mobile communication system of result of a search for a cell for handover, and transmitting a channel assign message to the synchronous modem unit when a handover command has been received from the asynchronous mobile communication system ; the second step of switching a vocoder and turning off the asynchronous modem unit ; and third step of the synchronous modem unit achieving synchronization with the synchronous mobile communication system.

D1 discloses a hard handoff method using a dummy pilot channel. In D1, if a neighboring base station is a dummy pilot cell, a mobile station perform hard handoff by the dummy pilot.

D2 discloses a method of triggering handoff from a first wireless communication system comprising : detecting at least one pilot signal from a second wireless communication system; measuring at least one target parameter from said second wireless system; and detecting when said target parameter exceeds a determined threshold level.

D3 discloses a handoff method between first and second cells using a gateway, wherein one frequency is used by the first cell and a first sector of the gateway, and a second frequency is used by the second cell and a second sector of the gateway.

(Continued on Supplemental Box)

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

(Continuation of Box No. V)

However, the prior arts do not disclose the subject matter of claims 1-15, and even though the prior arts may be combined, it is not obvious to a skilled person in a CDMA communication to derive the subject matter of claims 1-15 from the prior arts.

Therefore, the subject matter of claims 1-15 is considered to meet the requirement of PCT Article 33(2) and 33(3) in respect of novelty and inventive step.

2. INDUSTRIAL APPLICABILITY

The subject matter of claims 1-15 is considered to meet PCT Article 33(4) in respect of industrial applicability.

From the INTERNATIONAL BUREAU

PCTNOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

KIM, Seong-Nam
17th Floor, City Air Tower
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RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year) 12 April 2005 (12.04.2005)	
Applicant's or agent's file reference OS040032	IMPORTANT NOTIFICATION
International application No. PCT/KR05/000029	International filing date (day/month/year) 06 January 2005 (06.01.2005)
International publication date (day/month/year)	Priority date (day/month/year) 06 January 2004 (06.01.2004)
Applicant	SK TELECOM CO., LTD. et al

- By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- (If applicable)* The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- (If applicable)* An asterisk (*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
06 January 2004 (06.01.2004)	10-2004-0000715	KR	30 March 2005 (30.03.2005)
27 January 2004 (27.01.2004)	10-2004-0005145	KR	30 March 2005 (30.03.2005)

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